64. (New) The method of claim 46 wherein said microband electrode array sensor wherein said insulating material is chosen from the group consisting of silicon carbide, silicon nitride, and silicon dioxide.

65. (New) The method of claim 46 wherein the exposed surface of each of said microband electrodes has a thickness of between about .03 and 5 micrometers.

66. (New) The method of claim 46 wherein the exposed surface of each of said microband electrodes has a thickness of between about .1 to about .2 micrometers.

67. (New) The method of claim 46 wherein said microband electrode array sensor further comprises an adhesion layer between said insulating layer and said microband electrodes.

68. (New) The method of claim 67 wherein said adhesion layer comprises chromium.

Amendments to the Specification

Page 4, third full paragraph

U.S. Patent No. 5,670,031 by Hintsche et al. describes an electrochemical sensor with multiple interdigital microelectrodes with structure widths in the sub-micron range. The spaces between the interdigitated electrodes is about 700 nm, "which are small relative to the distances traveled by the molecules to be detected, in the measuring time."

Page 30, paragraph heading above first full paragraph

Simultaneous Determination of Cu(II) and Hg(II) at Microband Electrodes

Page 30, first full paragraph

Due to the high mass transport rate constants associated with microband electrodes, it was decided to test the response of the Pt and Au band arrays in aqueous solutions containing trace amounts of Cu(II) and Hg(II) without any deliberately added supporting electrolyte and

without solution deoxygenation. As an indication of the sensitivity of the band electrodes, similar measurements in the same solution were made using microdisk array electrodes as described in U.S. Provisional Application Serial No. 60/030,319, which was filed on November 1, 1996. For these measurements, background subtraction was not used so the true nature of the electrode responses could be observed. Figure 17 shows the response of an array of ten 25 μm diameter Au microdisk electrodes. As can be seen from the figure, the maximum sensitivity obtained with a 180 second deposition was 500 ppb. Slightly better results were obtained with an array of six 25 μm diameter Pt microdisk electrodes. The maximum sensitivity for the Pt array was 250 ppb with a 180 second deposition time and is illustrated in Figure 18. The same sensitivity was also obtained with an array of ten 7 μm diameter carbon microdisk electrodes. As illustrated in Figure 19, the maximum response for the carbon array was also 250 ppb for a 180 second deposition time.